REMARKS

I. Petition for Extension of Time

Applicants herewith petition the Commissioner for Patents to extend the time for response to the Office Action mailed 20 November 2008 for one (2) months from 20 February 2009 to 20 April 2009. Authorization is given to charge the extension of time fee of $490.00 (37 C.F.R. §1.136 and §1.17) to Deposit Account No. 23-1703. Any deficiency or overpayment should be charged or credited to the above numbered deposit account.

II. Disposition of claims

Claims 1-18 are pending. The election of species requirement of record has been made final. Claim 6, 7 and 14 are withdrawn from consideration. Claims 1-5, 8-13 and 15-18 are rejected.

III. Claim amendments

Independent claims 1, 5 and 16 have been amended to clarify that the claimed invention is directed to the special needs in the treatment of a pediatric population in the administration of an aqueous suspension via a gastric tube or syringe. Support is found at page 1, lines 8-10 of the specification. In accordance with claims 1 and 16, the aqueous suspension is comprised of a solid composition dispersed in an aqueous carrier, wherein the solid composition comprises a therapeutically effective amount of an acid labile proton pump inhibitor ("PPI") in the form of a multiple of enteric coating layered pellets in admixture with at least one pharmaceutically acceptable thickener. Alternatively, in accordance with claim 5, the enteric coating layered pellets are dispersed in a viscous aqueous medium.

IV. Claim Objections

Applicants respectfully submit that the "a" before the expression "multiple of enteric coating pellets" in claims 1, 5 and 16 is not a typographical error. As recited in these claims, the acid labile proton pump inhibitor is in the form of more than one pellet, i.e., a multiple of pellets. Each pellet is layered with an enteric coating. Withdrawal of the objection is requested.

PAGE 5/13 * RCVD AT 4/16/2009 12:32:08 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/43 * DNIS:2738300 * CSID:6468852184 * DURATION (mm-ss):02-46

V. Claim rejections – 35 U.S.C. §102

Claims 1-5, 8, 9, 12 and 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 94/25070 (hereinafter "Olovson").

As stated in the Abstract, Olovson discloses a pharmaceutical composition designed for the treatment of gastric acid related diseases in animals, e.g., horses, camels, dolphins, sea-lions, llamas, dogs, cats and pigs (p. 1, lines 20-22). The pharmaceutical composition comprises a PPI and a gelling agent (Abstract). There is no enabling disclosure of an administration route or pharmaceutical formulation that is responsive to the special needs in the treatment of a pediatric population. Therefore, since each and every feature of the claimed invention is not found within the four corners of Olovson, withdrawal of the §102 rejection is deemed proper.

VI. Claim rejections – 35 U.S.C. §103

a. Olovson

Claims 1-5, 8, 9, 12, 13 and 15-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Olovson.

The claimed invention provides a novel and advantageous solution to the clinical problems associated with the oral administration of enteric coated pellets of a PPI to pediatric patients who are suffering from a gastrointestinal disorder and who may also have difficulties swallowing. For this pediatric population, administration of tablets, capsules or pellets mixed with soft foods or juices is not an option (See p. 2, line 26, to p. 3, line 16). Although having advantages, administration through a syringe or gastric tube also has its own disadvantages as disclosed in the specification at page 3, lines 18-25:

- Problems that might arise with administration of enteric coated pellets through gastric tube are for instance caused by the size of the enteric coating layered pellets and the inner diameter the tube or the outlet of the syringe, which might cause clogging in the syringe or tube. This is especially critical for pediatric patients where thin tubes are often required.

PAGE 6/13 * RCVD AT 4/16/2009 12:32:08 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/43 * DNIS:2738300 * CSID:6468852184 * DURATION (mm-ss):02-46

- There is also a risk of reduced patient compliance and non-complete dose delivery because of pellets sediment in the glass and/or clogging the syringe used when preparing the suspension. This is especially critical in pediatric use when working with small volumes and doses.

The Examiner's attention is directed to the specification at page 5, lines 8-21, for a discussion of the problems associated with the administration of enteric coated pellets through a syringe or gastric tube and the solution provided by the claimed invention. Specifically, enteric coating layered pellets are usually spherical in shape and, in a liquid medium, tend to accumulate very tightly to each due to their uniform shape and pile up, or clog, the tube (p. 5, lines 12-16). Surprisingly, Applicants found that the higher the viscosity of the aqueous suspension of the claimed invention the thinner the gastric tubes can be used within certain limits (p. 5, lines 8-12). Therefore, pursuant to the claimed invention, the viscous dispersing medium enables the enteric coated pellets to float within the medium (p. 5, lines 15-16). Advantageously, this so-called "floating" property facilitates and improves the administration to young children by permitting thinner tubes to be used without clogging of the enteric coated pellets in the tubes (p. 5, lines 17-21).

Olovson does not disclose or suggest the administration of an aqueous suspension comprising a multiple of enteric coating layered pellets via a gastric tube or syringe to a pediatric population. Rather, Olovson discloses a mixture of a PPI in the form of enteric coating layered pellets, a dry gelling agent and water to obtain a ***paste-like gel*** to be applied on the dorsal end of the animal's tongue preferably with a syringe (See p. 3, lines 9-13; p. 8, lines 8-9; and claim 1).

In the paragraph bridging pages 3-4 of the Office Action, the Examiner states that Olovson is silent about the viscosity of the final preparation. Applicants respectfully disagree. Olovson inherently discloses that the consistency of the paste-like gel is critical to the successful administration of the active ingredient to the animal. Firstly, the consistency must be thick enough, i.e., like a solid gel having a high viscosity, so that the dose can be applied to and remain on the animal's tongue without the risk of running off the tongue before swallowing. Secondly, the consistency must be thick enough to mask the presence of the enteric coating layered pellets in the dose which the animal would naturally start to chew, thereby destroying the protective

PAGE 7/13 * RCVD AT 4/16/2009 12:32:08 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/43 * DNIS:2738300 * CSID:6468852184 * DURATION (mm-ss):02-46

layer of the enteric coating and exposing the acid-labile active to the acidic environment of the stomach.

Therefore, in view of the intended veterinary application, it cannot be ignored that Olovson inherently discloses a pharmaceutical composition that has the consistency of a paste- or solid-like gel that does not run. In contrast to Olovson, the claimed invention is characterized by the administration of a viscous suspension with pellets of the PPI floating in the aqueous suspension to facilitate administration of the active ingredient through a thin gastric tube (See specification at p. 5, lines 8-21). As such, the aqueous suspension of the claimed invention cannot have the paste-like gel consistency required by Olovson.

In view of the foregoing, it is submitted that the intended purpose and function of Olovson would be destroyed if the disclosed veterinary composition were to be modified, as suggested by the Examiner, for administration to a pediatric population as claimed. In this regard, the Examiner's attention is directed to M.P.E.P §2143.01 "Suggestion or Motivation To Modify the References [R-6] - 2100 Patentability" where is it expressly stated that the prior art cannot be modified to render it unsatisfactory for its intended purpose.

M.P.E.P §2143.01 "Suggestion or Motivation To Modify the References [R-6] - 2100 Patentability"

V. THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE

> If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

Relying on M.P.E.P. §2143.01 and the case law cited therein, Applicants submit that a *prime facie* case of obvious has not been established. Modification of Olovson as suggested by the Examiner in support of the obviousness rejection would render that reference unsatisfactory for its intended purpose. Specifically, administration of a viscous suspension with pellets of the

PAGE 8/13 * RCVD AT 4/16/2009 12:32:08 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/43 * DNIS:2738300 * CSID:6468852184 * DURATION (mm-ss):02-46

PPI floating in the aqueous suspension as claimed to facilitate administration of the active ingredient through a thin gastric tube would render the veterinary composition disclosed by Olovson useless as the dose would run off the animal's tongue and invite chewing before swallowing. The §103 rejection is, therefore, improper and withdrawal thereof is requested.

b. Olovson + Calanchi

Claims 1-5, 8, 9, 12, 13 and 15-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Olovson in view of US 6,261,602 to Calanchi et al. ("Calanchi").

Calanchi discloses a sachet dosage form prepared from a base granular product made by subjecting one or more thickening agents and one or more disintegrating agents to wet or dry granulation (See claim 1). The granular product is used as a pharmaceutical carrier of pharmaceutical compositions that are capable of rapid suspension in water or aqueous media including saliva. The compositions may be used by addition to a glass of water with stirring or taken directly in the mouth (See Abstract; col. 6, lines 1-8).

The Examiner relies on Calanchi for the disclosure of starch as a thickening agent (See claim 5). However, it is evident that Calanchi teaches away from the claimed invention. The intended purpose of the claimed invention is to administer an aqueous suspension containing enteric coating layered pellets of a PPI to a pediatric patient having difficulty swallowing. Therefore, the administration routes disclosed by Calanchi - the pharmaceutical composition is poured directly into a glass of water for drinking or poured directly in the mouth for swallowing - are inapposite to the administration route of the claimed invention through a syringe or gastric tube. As such, Calanchi fails to give any meaningful suggestion of using a viscous medium with pellets of the PPI floating in the aqueous suspension to facilitate administration of the active ingredient through a thin gastric tube.

Moreover, Calanchi does not overcome the fundamental failure of the primary reference to Olovson to establish a *prima facie* case of obviousness for the reasons given in Section VI(a), above. The intended purpose and function of Olovson would be destroyed if the disclosed veterinary composition were to be modified, as suggested by the Examiner, for administration to a pediatric population as claimed. For all of the foregoing reasons, therefore, the §103 rejection

PAGE 9/13 * RCVD AT 4/16/2009 12:32:08 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/43 * DNIS:2738300 * CSID:6468852184 * DURATION (mm-ss):02-46

based on the combination of Olovson and Calanchi is improper and withdrawal thereof is requested.

c. Olovson + Mulchandani

Claims 1-5, 8-12 and 15-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Olovson in view of US 5,108,767 to Mulchandani et al. ("Mulchandani").

According to Olovson, the past-like gel is applied dorsally onto the tongue of the animal with ***a suitable applicator*** (p. 3, lines 12-13). When read in context, Applicants submit that this disclosure teaches away from the prior art use, as discussed in the Background section at page 1, lines 28-21, of oral or naso-gastric tubes that were used to administer non-acid degradable drugs such as histamine-2-receptor antagonists, e.g., cimetidine, ranitidine, etc. Specifically, prior to Olovson, it was known that the use of gastric tubes was traumatic to the animal and required sedation and trained personnel to assist in the administration. To avoid these known disadvantages, Olovson provides a paste-like gel having a sufficiently thick consistency permitting application of a dose onto the dorsal end of the animal's tongue for swallowing thereby avoiding the use of gastric tubes.

Applicants submit, therefore, that Olovson does not disclose the use of a gastric tube for application of a paste-like gel onto the dorsal end of an animal's tongue. Gastric tubes would be unsuitable for the administration of the paste-like gel disclosed by Olovson. In any event, the use of a gastric tube would defeat the intended purpose and function of Olovson to eliminate trauma to the animal and the need for sedation and trained personnel. It is no surprise, therefore, that Olovson - as correctly noted by the Examiner on page 8 of the Office Action – does not disclose a diameter of any feeding tub. Nevertheless, the Examiner relies on Olovson in combination with Mulchandani in support of the rejection that it would have been obvious to administer a multiparticulate PPI composition through a feeding tube as taught by Olovson – *Olovson does not teach* - with a feeding tube size of 8 or 10 or larger as disclosed by Mulchandani.

Mulchandani is directed to a liquid nutritional product for persons undergoing renal dialysis (col. 1, lines 5-7). The product may be drunk or tube fed (col. 15, lines 18-19).

PAGE 10/13 * RCVD AT 4/16/2009 12:32:08 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/43 * DNIS:2738300 * CSID:6468852184 * DURATION (mm-ss):02-46

Mulchandani does not disclose or suggest the administration of a viscous medium with pellets of a PPI floating in the aqueous suspension to facilitate administration of the active ingredient through a thin gastric tube. Moreover, the proposed use of a gastric tube by the Examiner is counterintuitive to the primary reference to Olovson. As previously stated, Olovson provides a paste-like gel having a sufficiently thick consistency permitting application of a dose onto the dorsal end of the animal's tongue for swallowing thereby avoiding the use of gastric tubes. Accordingly, there is no motivation to modify Olovson by combining that reference with Mulchandani.

Unexpectedly and advantageously, Applicants found that enteric coated pellets of a PPI could be administered through more narrow tubes without clogging when the pellets were dispersed in an aqueous carrier (tap water) with a thickener in comparison to the same carrier without a thickener (See Experimental Report, pp. 17-19). This advantage is not suggested by the cited prior art.

Finally, Mulchandani does not overcome the fundamental failure of the primary reference to Olovson to establish a *prima facie* case of obviousness for the reasons given in Section VI(a), above. The intended purpose and function of Olovson would be destroyed if the disclosed veterinary composition were to be modified, as suggested by the Examiner, for administration to a pediatric population as claimed. For all of the foregoing reasons, therefore, the §103 rejection based on the combination of Olovson and Mulchandani is improper and withdrawal thereof is requested.

d. Olovson + Cullen

Claims 1-5, 8, 9, 12, 13 and 15-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Olovson in view of US 2002/0064555 to Cullen et al. ("Cullen")..

Cullen discloses an enteric-coated PPI formulation. Example 1 is directed to the preparation of omeprazole 20 mg capsules whereas Example 2 is directed to the preparation of lansoprazole 15 and 30 mg capsules. Presumably, the capsules are administered orally to a patient in need thereof ([0028]; claim 16). The Examiner relies on Examples 1-2 to specifically reject claim 13 in view of the combination of Olovson and Cullen.

PAGE 11/13 * RCVD AT 4/16/2009 12:32:08 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/43 * DNIS:2738300 * CSID:6468852184 * DURATION (mm-ss):02-46

It is readily evident that the oral administration inherently disclosed by Cullen teaches away from the claimed invention. The intended purpose of the claimed invention is to administer an aqueous suspension containing enteric coating layered pellets of a PPI to a pediatric patient having difficulty swallowing. Therefore, the oral administration inherently disclosed by Cullen is contrary to the administration route of the claimed invention through a syringe or gastric tube. As such, Cullen fails to give any meaningful suggestion of using a viscous medium with pellets of the PPI floating in the aqueous suspension to facilitate administration of the active ingredient through a thin gastric tube.

As with the other secondary references, Cullen fails to overcome the fundamental failure of the primary reference to Olovson to establish a *prima facie* case of obviousness for the reasons given in Section VI(a), above. The intended purpose and function of Olovson would be destroyed if the disclosed veterinary composition were to be modified, as suggested by the Examiner, for administration to a pediatric population as claimed. For all of the foregoing reasons, therefore, the §103 rejection based on the combination of Olovson and Cullen is improper and withdrawal thereof is requested.

PAGE 12/13 * RCVD AT 4/16/2009 12:32:08 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/43 * DNIS:2738300 * CSID:6468852184 * DURATION (mm-ss):02-46

CONCLUSION

Applicants have made a good faith attempt to respond to the Office Action. For all of the foregoing reasons, claims 1-5, 8-13 and 15-18 are in condition for allowance, which action is earnestly solicited. In view of the allowability of the elected claims, withdrawal of the election of species requirement as to claims 6, 7 and 14 is also requested.

Any fees due in connection with this response should be charged to Deposit Account No. 23-1703.

Dated: 16 April 2009

Respectfully submitted,
/John M. Genova/
John M. Genova
Reg. No. 32,224

Customer No. 007470
Direct Dial: (212) 819-8832

PAGE 13/13 * RCVD AT 4/16/2009 12:32:08 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/43 * DNIS:2738300 * CSID:6468852184 * DURATION (mm-ss):02-46